CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

ORDER NO. 91-133
SITE CLEANUP REQUIREMENTS FOR:

CERRO METALS PRODUCTS COMPANY
6707 MOWRY AVENUE
NEWARK, ALAMEDA COUNTY

The California Regional Water Quality Control Board, San Francisco Bay Region (hereinafter called the Board) finds that:

1. SITE DESCRIPTION. The Cerro Metal Products Company facility, hereinafter referred to as the site, is bordered by Cherry Street to the northeast, Alameda County Flood Control Channel/Southern Pacific Railroad to the southwest, Peterbilt Motors to the northwest, and Mowry Avenue to the southeast (Figure 1).

   The Cerro Metal Products Company plant has been closed and the manufacturing building removed; presently the lot is vacant. The facilities formerly located at the site included a manufacturing plant, storage building, office building, wastewater treatment facilities, oil/water separator, baghouse, and cooling towers (Figure 2).

2. SITE HISTORY. The property was originally tidelands which were filled in and used for farming, possibly including ranching. Prior to 1955 the 40-acre site was owned by Southern Pacific Corporation. In 1957, Consolidated Copper Company purchased the property and began operation of a brass manufacturing plant. In 1960, Cerro Corporation purchased the fabricating plant from Consolidated Copper Company, and the company name changed to Cerro Copper and Brass, A Division of Cerro Corporation.

   In or about 1972, Cerro Corporation was merged with The Marmon Group, Inc. Subsequently, the manufacturing plants were split off and the Newark facility became Cerro Metal Products, a division of The Marmon Group, Inc., and thereafter The Marmon Group, Inc. changed its name to The Marmon Corporation, and Cerro Metal Products Company became a wholly-owned subsidiary. Hereafter Cerro Metal Products Company is referred to as the Discharger. Also in 1972, three acres were sold to Peterbilt Motors Company to facilitate ingress/egress from their adjacent property. In March 1986 the Newark facility was closed and the manufacturing operation was moved to the Los Angeles area.

   Approximately 10 acres were used for manufacturing purposes by the Discharger, with the balance used for agriculture (hay). Chemicals handled at the facility included sulfuric, muriatic, chromic and nitric acids, sulphur dioxide gas, turco solvent (containing trichloroethylene and dichloromethane), Dyna Sprex Powder (containing sodium hydroxide), liquid caustic, trichloroethane, oil and diesel fuel. Prior to 1985, two unlined sludge settling ponds gathered sludge from a clarifier. These ponds were officially closed by a letter dated May 2, 1986 from the RWQCB staff to the Discharger.

3. OCCURRENCE OF GROUNDWATER. Regionally, the site is within the Niles Subarea groundwater basin. The Niles Subarea extends southward and westward under San Francisco Bay and consists of a series of flat-lying aquifers separated by clay aquitards. The shallowest of the aquifers, the Newark, is present at an average depth of 45 feet below land surface at the site.

The local geology is summarized in a March 15, 1991 Hydrogeologic Assessment Report (Beta Environmental Consultants). According to this report, the site is underlain by 20 feet of fairly continuous clay with occasional and distinct seams of silts and clays. Vertical and horizontal pathways for surface water include the rootlets and worm tubes observed in this clay layer. Wells screened in this clay layer indicate that a portion of it is saturated. Underlying this unit, a two to four foot thick continuous sand zone is present between 14 and 27 feet below land surface. Estimated groundwater flow rates, based on wells screened across the sand zone, are between 14 and 27 feet per year. The sand is underlain by a 14 to 20 foot thick clay zone. The Newark Aquifer underlies the clay zone and is present at an average depth of 45 feet below land surface. The Newark Aquifer consists of sands and gravels. Throughout this Order the term "shallow zone" will refer to the saturated portion of sediments overlying the Newark Aquifer.

4. SOIL AND GROUNDWATER INVESTIGATIONS. During an NPDES site inspection in November 1985, RWQCB staff observed significant soil discoloration in the vicinity of the oil/water separator. As a result the RWQCB required a soil and groundwater investigation. Environmental investigations have been ongoing since 1986 in response to RWQCB requests and as part of site closure for the Alameda County Health Agency (ACHA).

Potential source areas identified and investigated by the discharger include the following: the oil/water separator, neutralization/acid storage tanks, treated wastewater drainage ditch, evaporation ponds, and an underground diesel tank removed in 1986. To date there are 12 shallow zone monitoring wells on the site; a volatile organic chemical (VOC) plume including TCE, 1,1-DCE, 1,1-DCA, and 1,1,1-TCA is present. Maximum concentrations of TCE in the shallow zone exceed 6 ppm adjacent to the former manufacturing plant. The source(s) and extent of VOCs is not fully defined.

Other organic constituents that have been detected in the shallow zone include oil and grease, gasoline, diesel, xylene, and toluene. With the exception of diesel, these constituents were not detected in the last two quarters of analyses. The Discharger has stated that the historical detections may be attributable to incorrect test methods and/or interference with elevated concentrations of VOCs. The significance of the historical detection of the constituents requires further investigation. In the most recent sampling round inorganic concentrations included copper (0.0027 ppm), nickel (.303 ppm), and barium (1.01 ppm). Additional sampling rounds will be necessary to establish whether inorganic constituents meet applicable water quality standards.

The ACHA directed regulatory activity regarding soil investigations between 1988 and 1990 as part of the facility closure. Chemicals detected in soil at discrete locations include benzene, toluene, xylenes, chloroform, diesel, oil and grease, barium, copper, lead, phthalates, phenol, benzoic acid, and chrysene. The full extent of soil contamination has

not been defined; ACHA requested further soil sampling in a December 13, 1989 letter to the Discharger.

5. SALINITY BARRIER PROJECT. The Alameda County Water District (ACWD) is in the process of implementing a Salinity Barrier Project (SBP) which will withdraw saline water from the Newark Aquifer. The SBP will be a line of extraction wells which will serve two functions: first, under pumping operation, the wells will create a hydraulic trough along the bay to prevent the intrusion of saline water into potable aquifers during dry periods when groundwater levels are below sea level; second, the SBP will cause freshwater from the eastern recharge zones of the Newark Aquifer to migrate towards the SBP wells, enabling domestic and industrial use of groundwater to resume in portions of the Newark Aquifer east of the SBP. The Site is immediately east of the proposed SBP alignment as currently designed.

   Implementation of the SBP near the Site may accelerate the migration of pollutants both horizontally within the Newark Aquifer (if they are present) and vertically from the shallow zone to the Newark Aquifer. The nearest existing SBP well (SITE A) is located approximately 1600 feet from the existing plume. In the absence of actions to prevent it, pollutants could migrate to the SBP extraction wells, possibly requiring cleanup of the groundwater prior to the planned surface discharge. Proposed surface discharges from the SBP extraction wells would discharge to the South San Francisco Bay by means of existing natural or manmade drainage channel. It is the intent of the Board to adopt Site Cleanup Orders for those sites affecting the ability of the ACWD to implement the SBP. Irrespective of actions associated with the SBP, pollutants may migrate from the shallow zone to surface waters, and/or to the Newark Aquifer .

6. STATE BOARD RESOLUTION 68-16: On October 28, 1968, the State Board adopted Resolution No. 68-16, "Statement of Policy with Respect to Maintaining High Quality Waters in California." This policy calls for maintaining the existing high quality of State waters unless it is demonstrated that any change would be consistent with the maximum public benefit and not unreasonable affect beneficial uses. The original discharge of waste to the groundwater of this Site was in violation of this policy; therefore, the groundwater quality needs to be restored to its original quality to the extent reasonable. For the purpose of establishing cleanup objectives, the shallow zone and the Newark Aquifer at the site are designated a potential source of drinking water, and protective levels shall be those levels which have been established as protective of drinking water.

7. STATE BOARD RESOLUTION 88-63: On March 30, 1989, the Regional Water Quality Control Board incorporated the State Board Policy of "Sources of Drinking Water" into this Regional Board's Basin Plan. The Regional Board's Policy provides for a Municipal and Domestic Supply Designation for all waters of the State with some exceptions. Two relevant exceptions are 1) the total dissolved solids in the groundwater exceed 3000 mg/l, and 2) the water source does not provide sufficient water to supply a single well capable of producing an average, sustained yield of 200 gallons per day. Based on shallow zone groundwater data (electrical conductivity and pump test results) for the site, the Regional Board finds that neither of these two exceptions apply. Therefore, the shallow zone is considered a source of Drinking Water under State Board Resolution 88-63. The

Discharger has not provided documentation on the general mineral quality of Newark Aquifer underlying the site to determine whether it meets criteria for 88-63 Drinking Water.

8. SCOPE OF THIS ORDER. This Order contains tasks for completion of groundwater characterization at the site; implementation and evaluation of the interim remedial actions for on-site soil pollution and on-site and off-site groundwater pollution attributable to the Discharger, and evaluation and implementation of final cleanup actions. The tasks and schedules set forth were developed in cooperation with the Discharger. The tasks are necessary to alleviate the threat to surface and groundwater posed by the migration of contaminants and to provide a substantive technical basis for designing and evaluating the effectiveness of final remediation.

9. BASIN PLAN. The Board adopted a revised Water Quality Control Plan for the San Francisco Bay Basin (Basin Plan) dated December 1986. The Basin Plan contains water quality objectives and beneficial uses for San Francisco Bay and contiguous surface and groundwaters.

10. BENEFICIAL USES - GROUNDWATER. There is no known current use of the shallow zone and Newark Aquifer groundwater in the vicinity of the Site. The potential beneficial uses of the shallow zone and Newark Aquifer in the vicinity of the Site include:

    a. Municipal and domestic water supply
    b. Industrial process water supply
    c. Industrial service water supply
    d. Agricultural water supply

11. BENEFICIAL USES - SURFACE WATER. The existing and/or potential beneficial uses of San Francisco Bay and contiguous surface waters in the vicinity of the Site include:

    a. Contact and non-contact water recreation
    b. Wildlife habitat
    c. Warm and cold fresh water habitat
    d. Fish migration and spawning

12. CEQA. This action is an Order to enforce the laws and regulations administered by the Board. This action is categorically exempt from the provisions of the CEQA pursuant to Section 15321 of the Resources Agency Guidelines.

13. PUBLIC HEARING. The Board has notified the Discharger and interested agencies and persons of its intent under California Water Code Section 13304 to prescribe Site Cleanup Requirements for the discharge and has provided them with the opportunity for a public hearing and an opportunity to submit their written views and recommendations.

    The Board, in a public meeting, heard and considered all comments pertaining to the discharge.

IT IS HEREBY ORDERED, pursuant to Section 13304 of the California Water Code, that Cerro Metal Products Company shall cleanup and abate the effects described in the above findings as follows:

A. PROHIBITIONS

1. DISCHARGE OF WASTE: The discharge of wastes or hazardous materials in a manner which will significantly degrade water quality or adversely affect the beneficial uses of the waters of the State is prohibited.

2. POLLUTION MIGRATION THROUGH THE SUBSURFACE: Significant migration of pollutants through subsurface transport to waters of the State is prohibited.

3. POLLUTION MIGRATION CAUSED BY INVESTIGATIONS: Activities associated with the subsurface investigation and cleanup, that will cause significant adverse migration of pollutants, are prohibited.

B. SPECIFICATIONS

1. NUISANCE CLAUSE: The treatment or disposal of soil or groundwater containing pollutants shall not create a nuisance as defined in Section 13050 (m) of the California Water Code.

2. REMEDIAL ACTIVITIES: The Discharger shall conduct monitoring activities reasonably necessary to define the current local hydrogeologic conditions, and the lateral and vertical extent of soil and groundwater pollution. Should monitoring results show evidence of plume migration, additional plume characterization may be required.

3. POTENTIAL CONDUITS: Any wells identified as potential conduits for the migration of pollutants attributable to the discharger shall be properly abandoned, to the extent legally possible. A detailed workplan shall be submitted to the RWQCB and ACWD for review and approval which describes the proposed methods of abandonment for each well identified.

4. CLEANUP GOALS - SOILS: The cleanup goals for source area soils shall be background concentrations for metals and petroleum products and no greater than 1 ppm for total VOCs. Alternate soil cleanup goals may be proposed by the Discharger based on site specific data. If higher levels of pollutants to be left in soils are proposed, the Dischargers must demonstrate that the aforementioned cleanup goal is not feasible , that the alternate levels will not threaten the quality of waters of the State, and that human health and the environment are protected. Final cleanup goals for source-area soils must be acceptable to the Executive Officer. If any significant concentrations of chemicals are left in the soil, follow-up groundwater monitoring will be required.

5. CLEANUP GOALS - GROUNDWATER: Final cleanup goals for polluted groundwater attributable to the Discharger, including sources of drinking water, onsite and offsite, shall be background water quality if feasible, in accordance with the State Water Resources Control Board's Resolution No. 68-16, "Statement of Policy with Respect to Maintaining High Quality of Waters in California". If background water quality goals are not achievable, as determined by data submitted in annual reports, alternative goals may be proposed and shall be approved by the Board. Alternate goals may include applicable standards, such as Maximum Contaminant Levels, and shall be based on an evaluation of the cost, effectiveness and a risk assessment to determine the affects on human health and the environment. These goals shall reduce the mobility, toxicity, and volume of pollutants.

6. RECLAMATION: If groundwater extraction and treatment is considered as a final alternative, the feasibility of water reuse, reinjection, and disposal to the sanitary sewer must be evaluated. Based on the Regional Board Resolution 88-160, the Discharger shall optimize, with a goal of 100%, the reclamation or reuse of groundwater extracted as a result of cleanup activities. The Discharger shall not be found in violation of this Order if documented factors beyond the Discharger's control prevent the Discharger from attaining this goal, provided the Discharger has made a good faith effort to attain this goal. If reuse or reinjection is part of a proposed alternative, an application for Waste Discharge Requirements may be required. If discharge to waters of the State is part of a proposed alternative, an NPDES permit application must be completed and submitted, and must include the evaluation of the feasibility of water reuse, reinjection, and disposal to the sanitary sewer.

C. PROVISIONS

1. The Discharger shall comply with all Prohibitions and Specifications above, by completing the tasks outlined below in accordance with the following time schedule:

COMPLETION DATE/TASK:

a. **COMPLETION DATE: 30 days after adoption of this Order.**

TASK: REVISION OF SELF MONITORING PROGRAM. Submit a report, acceptable to the Executive Officer, which proposes modifications to the existing Self-Monitoring Program approved by the RWQCB in a January 19, 1990 letter to the Discharger. The revised monitoring program shall include, but need not be limited to, a summary of the existing program, proposed changes, and justification for the proposed changes. The existing and proposed location of sample wells, frequency of water level and water quality sampling, and identification of methods chosen for sample analysis shall be tabulated.

b. COMPLETION DATE: **60 days after adoption of this Order.**

TASK: EVALUATION OF POTENTIAL CONDUITS. Submit a technical report acceptable to the Executive Officer which contains the results of a potential conduit study. Any potential conduit should be included which would allow pollutants to migrate from the ground surface to groundwater, and/or between water bearing zones. These include but are not limited to existing monitoring and extraction wells and historical extraction or drainage wells.

c. COMPLETION DATE: **November 1, 1991**

TASK: EVALUATION AND RECOMMENDATION OF INTERIM REMEDIAL ACTIONS. Submit a technical report acceptable to the Executive Officer which evaluates the feasibility of alternative interim remedial actions for the shallow zone and on-site soil contamination which would minimize further water quality degradation in surface and groundwater. The report shall recommend the preferred interim soil and groundwater cleanup alternative and provide a time schedule for implementation.

d. COMPLETION DATE: **90 days after the Executive Officer approves the Evaluation of Conduits Report**

TASK: CLOSURE OF POTENTIAL CONDUITS. Submit a technical report acceptable to the Executive Officer which documents the closing of any potential conduits as identified in Provision C.1.b. This technical report should include documentation of the appropriate permits, types and quantities of materials used to seal each well, and/or the method of well destruction, as well as a description/location of the water bearing zones which were sealed.

e. COMPLETION DATE: **180 days after the Executive Officer approves the recommended Interim Remedial Actions.**

TASK: IMPLEMENTATION OF INTERIM REMEDIAL ALTERNATIVES. Submit a technical report acceptable to the Executive Officer documenting the implementation of the preferred groundwater and soil remedial alternative selected in Task C.1.c. The implementation includes but is not limited to engineering designs, equipment procurement, construction and installation, start up, and permitting (e.g. building permits, conditional use permits, air permits, discharge permits, hazardous waste variances, etc.).

f. COMPLETION DATE: **June 15, 1992**

TASK: NEWARK AQUIFER POLLUTION CHARACTERIZATION AND RECOMMENDED REMEDIAL ACTIONS. Submit a technical report acceptable to the Executive Officer which defines and includes the results of work performed by the Discharger to determine the extent of contaminants in the Newark Aquifer at the Discharger's facility. This technical report shall contain a summary and

evaluation of all information the Discharger has collected regarding any Newark Aquifer groundwater pollution at or adjacent to the Site and the potential for vertical migration of shallow zone contamination to the Newark Aquifer. Appropriate remedial actions shall be recommended.

g. **COMPLETION DATE: January 31, 1993**

TASK: FINAL SHALLOW ZONE CHARACTERIZATION AND FEASIBILITY STUDY. Submit a technical report acceptable to the Executive Officer which defines and includes the results of work performed to complete the vertical and horizontal characterization of shallow zone contamination at the Discharger's facility. Additionally the report shall evaluate the effectiveness of the interim soil and groundwater remediation. The report will identify and discuss the final cleanup alternatives, their feasibility, and their cost and benefits in relation to beneficial use protection, and recommend the preferred cleanup alternative and a time schedule for implementation of the cleanup measures. The report shall also specify a network of monitoring wells which will document the effectiveness which remediation of the groundwater will have at the site.

h. **COMPLETION DATE: 180 days after the Executive Officer approves the Final Characterization and Feasibility Study**

TASK: IMPLEMENTATION OF FINAL REMEDIAL ALTERNATIVES. Submit a technical report acceptable to the Executive Officer documenting completion of the implementation of the preferred remediation as selected in Provision C.2.f and C.2.g. The implementation includes but is not limited to engineering designs, equipment procurement, construction and installation, start up, and permitting (e.g. building permits, conditional use permits, air permits, discharge permits, hazardous waste variances, etc.).

3. On a quarterly basis, the Discharger shall submit a technical report one month following the end of each quarter, commencing with a report for the quarter ending September 30, 1991 and due October 31, 1991. These quarterly technical reports shall include, but need not be limited to, appropriately scaled and detailed base maps, updated groundwater and soil sampling results tabulated with results from the preceding three quarters, updated groundwater gradient maps, updated cross-sectional geologic maps if new information has changed interpretations, and isoconcentration maps showing key indicator contaminants.

4. On an annual basis, for the previous calendar year, by the end of the second month following the calendar year, the Discharger shall submit an annual technical report acceptable to the Executive Officer which shall document and evaluate the progress of remedial actions. This report shall contain, but not be limited to, information on the number of gallons of groundwater pumped and

treated, where the waters were discharged, changes and trends in water quality, problems encountered in the past year with implemented and/or proposed solutions, and projected cleanup anticipated for the coming year. In addition, the Discharger shall evaluate the potential impact of shallow zone and Newark Aquifer contamination on the SBP during the SBP's design and implementation phases.

5. As specified in Section 13273(b) of the California Water Code, all hydrogeologic reports, documents, plans, and specifications, shall be certified by one of the following: a registered geologist, registered pursuant to Section 7850 of the Business and Professions Code; a certified engineering geologist, certified pursuant to Section 7842 of the Business and Professions Code; or a civil engineer registered pursuant to Section 6762 of the Business and Professions Code, who has at least five years experience in groundwater hydrology.

6. If the Discharger is delayed, interrupted or prevented from meeting one or more of the completion dates specified in this Order, the Discharger shall promptly notify the Executive Officer and the Board may consider revision to this Order.

7. All samples shall be analyzed by State certified laboratories accepted by the Board using approved EPA methods for the type of analysis to be performed. All laboratories shall maintain quality assurance/quality control records for Board review.

8. The Discharger shall maintain in good working order, and operate, as efficiently as reasonably possible, any facility or control system installed to achieve compliance with the requirements of this Order.

9. Copies of all correspondence, reports, and documents pertaining to compliance with the Prohibitions, Specifications, and Provisions of this Order, shall be provided to the following agencies:

    a. Alameda County Water District
    b. City of Newark
    c. Alameda County Health Care Services Agency
    d. State Department of Health Services/TSCD

10. The Discharger shall permit the Board or its authorized representative, in accordance with Section 13267(c) of the California Water Code:

    a. Entry upon premises in which any pollution sources exist, or may potentially exist, or in which any required records are kept, which are relevant to this Order.

    b. Access to copy any records required to be kept under the terms and conditions of this Order.

c. Inspection of any monitoring equipment or methodology implemented in response to this Order.

d. Sampling of any groundwater or soil which is accessible, or may become accessible, as part of any investigation or remedial action program undertaken by the Discharger.

11. The Discharger shall file a report on any changes in Site occupancy and ownership associated with the facility described by the Discharger.

12. If any hazardous substance is discharged in or on any water of the State, or discharged and deposited where it is, or probably will be, discharged in or on any waters of the State, the Discharger shall report such discharge to this Regional Board, at (415) 464-1255 on weekdays during office hours from 8 a.m. to 5 p.m., and to the Office of Emergency Services at (800) 852-7550 during non-business hours. A written report shall be filed with the Regional Board within five (5) working days and shall contain information relative to the nature of waste or pollutant, quantity involved, duration of the incident, cause of spill, Spill Prevention, Control and Countermeasures Plan (SPCC) in effect, if any, estimated size of affected area, nature of effects, corrective measures that have been taken or planned, and a schedule of these activities, and person/agencies notified.

13. The Board will review this Order periodically and revise the requirements as necessary to effectuate the intent of this Order in a prompt and reasonable manner.

I, Steven R. Ritchie, Executive Officer, do hereby certify that the foregoing is a full, true and correct copy of an Order adopted by the California Regional Water Quality Control Board, San Francisco Bay Region, on September 18, 1991.

Steven R. Ritchie
Executive Officer